

**Department of Energy
Office of Worker Protection Programs and Hazards Management
Radiological Control Technical Position
RCTP 2000 - 03**

**Obtaining Exposure Records for Controlling Exposures of Individuals Monitored at
Different Sites in a Year**

Issue:

Title 10, Code of Federal Regulations, Part 835 (10 CFR 835), "Occupational Radiation Protection," establishes occupational radiation protection requirements for Department of Energy (DOE) activities and includes requirements for controlling individual exposures to ionizing radiation. Section 835.702(d) of 10 CFR 835 requires that DOE activities include all occupational doses received in a year (except for doses resulting from authorized planned special exposures and emergency exposures) when demonstrating compliance with the dose limits established in 10 CFR 835.202(a). Questions have been raised concerning DOE's position on the level of effort needed to obtain records of an individual's current year exposures and the required timeliness of obtaining such records.

Introduction:

Individuals often work at and receive occupational radiation doses from more than one site or facility (including DOE-regulated, Nuclear Regulatory Commission/Agreement State-licensed, and foreign facilities) in a year. DOE regulations require that assessments of compliance with the occupational dose limits include all occupational doses received during a year, except for doses resulting from planned special exposures and emergency exposures. Because individuals may transfer between various facilities much more quickly than their individual dose records (due to delays in dosimetry processing, dose assessment, and administrative activities), the new employing facility may not have accurate records of the individuals dose received during the current year. The absence of accurate records can complicate efforts to ensure compliance with the occupational dose limits. The Office of Worker Protection Programs and Hazards Management (EH-52) received a request for a technical position on meeting the requirement of 10 CFR 835.702(d).

Discussion:

Applicable Requirements

10 CFR 835 *(These requirements were published in the November 4, 1998, amendment to 10 CFR 835)*

§ 835.702 Individual monitoring records.

- (c) The records required by this section shall:
 - (1) Be sufficient to evaluate compliance with subpart C of this part;

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- (d) Documentation of all occupational doses received during the current year, except for doses resulting from planned special exposures conducted in compliance with § 835.204 and emergency exposures authorized in accordance with § 835.1302(d), shall be obtained to demonstrate compliance with § 835.202(a). If complete records documenting previous occupational dose during the year cannot be obtained, a written estimate signed by the individual may be accepted to demonstrate compliance.

Applicable Guidance Documents

DOE Guide G 441.1-11, "Occupational Radiation Protection Record-keeping and Reporting Guide"

4.1.1.4 Lifetime Occupational Dose

For each radiological worker monitored in accordance with 10 CFR 835.402 (i.e., the radiological worker's dose is expected to exceed the monitoring threshold(s)), efforts shall be made to obtain records of prior years' occupational dose (10 CFR 835.702(e)). Efforts to obtain such records should include at least three written requests to each prior employer. If the prior employer is nonresponsive or complete records cannot be obtained for any reason, a written estimate signed by the worker may be accepted.

Technical Position:

Level of effort to obtain records of current year exposures

10 CFR 835.702(d) requires that documentation of all occupational doses received during the current year, except for doses resulting from planned special exposures conducted in compliance with 10 CFR 835.204 and emergency exposures authorized in accordance with 10 CFR 835.1302(d), be obtained to demonstrate compliance with 10 CFR 835.202(a). This includes both documented dose from monitoring in accordance with 10 CFR 835.402 and, as applicable, documented dose (i.e., any documented dose above zero) from monitoring that was not required by 10 CFR 835.402.

In addition, 10 CFR 835.702(c)(1) states that required records be adequate to demonstrate compliance with the dose limits. An acceptable approach for meeting this requirement is for a site to maintain records of all occupational doses received during the year for any monitored (internal or external exposure) individual at that site. The records would include doses received at other

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sites prior to being monitored at the site in question. Radiation exposure reports sent to individuals in accordance with 10 CFR 835 subpart I only need to include exposure data for the dose received at that site or facility.

Per 10 CFR 835.702(d), if complete records documenting previous occupational dose during the year cannot be obtained, a written estimate signed by the individual may be accepted to demonstrate compliance. DOE Guide G 441.1-11, "Occupational Radiation Protection Record-keeping and Reporting Guide," provides guidance in section 4.1.1.4 for meeting the 10 CFR 835.702(e) requirement to make reasonable efforts to obtain records of *prior* years' occupational dose records for radiological workers whose occupational dose is monitored in accordance with 10 CFR 835.402.

The guidance in DOE Guide 441.1-11 is also an acceptable approach for meeting the 10 CFR 835.702(d) requirement to obtain complete records documenting the *current* year's occupational dose. Specifically, appropriate efforts to obtain such records may consist of at least three written requests to each prior employer or site where the individual was monitored during the year. These efforts should be made for any individual whose internal or external dose is monitored at the site. If the prior employer or site where the individual was monitored is nonresponsive or complete records cannot be obtained, a written estimate signed by the worker may then be accepted.

Timeliness of obtaining required records

An acceptable approach is to obtain this documentation prior to allowing the individual to receive occupational exposure. This approach will help ensure compliance with the dose limits in 10 CFR 835 subpart C and to prevent an inadvertent exposure exceeding any administrative control level. For individuals who had not been monitored previously during the year, a signed written statement to that effect is adequate documentation.

Frequently, for individuals who had previously been monitored during the year, the process of obtaining exposure records may be too time consuming to allow the individual to commence scheduled work. In these situations, an acceptable approach would be to obtain a written estimate of the current year dose from the individual and implement appropriate administrative control levels for these individuals. This approach will allow these individuals to receive occupational exposure during the time period when efforts are being made to obtain complete records documenting previous occupational dose during the year. Administrative control levels implemented for this situation should consider the individuals' current year work history and the

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potential magnitude of occupational dose received (e.g., had they been involved in any radiological incidents, are they knowledgeable of the radiological conditions in areas where they worked, do they have any estimated exposure information from self reading dosimeters).

For members of the public being monitored per 10 CFR 835.402 and granted access to Controlled Areas, a written statement that they had not been monitored for, or received exposure to, ionizing radiation in a Controlled Area during the current year would typically be sufficient to ensure compliance with the dose limits in 10 CFR 835 subpart C. If a member of the public were to indicate that they had been monitored for or received exposure to ionizing radiation in a Controlled Area and could not provide adequate documentation of any subsequent exposure, implementation of the above guidance for occupational exposures would be an acceptable approach (i.e., a written estimate and appropriate administrative controls).

Summary:

An acceptable approach for meeting the requirement that records be adequate to demonstrate compliance with the dose limits is for a site to maintain records of all occupational doses received during the year for all monitored (internal or external exposure) individuals. Records should include doses received at other sites prior to being monitored at the site in question. Radiation exposure reports sent to individuals in accordance with 10 CFR 835 subpart I only need to include exposure data for the dose received at that site or facility.

Efforts to obtain current year occupational exposure records should include at least three written requests to each prior employer during the year. These efforts should be made for any individual whose internal or external dose is monitored at the site. A written estimate, in conjunction with appropriate administrative control levels, may be used to allow individuals to receive occupational exposure during the time period when efforts are being made to obtain complete records documenting previous occupational dose during the year. A similar approach is acceptable for members of the public being monitored per 10 CFR 835.402 and granted access to Controlled Areas.

References:

10 CFR 835, "*Occupational Radiation Protection*," U.S. Department of Energy,
November 4, 1998

DOE Guide G 441.1-11 "*Occupational Radiation Protection Record-keeping and Reporting
Guide*," U.S. Department of Energy, May 20, 1999